National Defence / Défense nationale

Chief Review Services / Contrôleur général

CRS CS Ex

NATIONAL PROCUREMENT: ASSESSMENT STUDY

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SYNOPSIS

This report, presented in the form of a detailed deck, conveys the results of a study of funding processes for the Department of National Defence (DND) National Procurement (NP) Account. It was performed by the Chief Review Services (CRS) at the request of Senior Management. The NP Account provides funding for materiel and support services for centrally-managed equipment and systems in the DND – an average annual expenditure of $1.6 billion, or approximately 13 per cent of the DND budget. The objective of the CRS study was to assess NP resource management practices and processes, with a particular focus on circumstances regarding over-spending within the Air Staff apportioned account – administered by the Director General Air Equipment Program Management Division (DGAEPM).

The study found that the $28M over-expenditure amounted to 4 per cent of the Air Staff apportionment of $627M. A difficulty, from a corporate perspective, was the untimely forecasting of changes. There were a number of factors which contributed to this situation, not the least of which was that, due to fiscal pressures, the original NP funding available to DGAEPM fell short of historical spending. In this respect, we have recommended that funding allocation processes be revisited and have proposed four options for consideration. Contractual commitments, and interfaces with the capital program, need to be better factored into the process. There are also inherent difficulties with allocations which assume the practicability of differential readiness within equipment fleets. This study has proposed options for improving.

Notwithstanding improvements which can be made to the funding allocation process, we also noted limitations in DGAEPM expenditure forecasting. The system had not accurately captured current forecasting information for the last quarter of 2001/02 and included it in the Group roll-up for review by the ADM. Accordingly, it was assumed that a greater portion of the DGAEPM commitments would move to the next fiscal year. We have made additional recommendations for improvements to the DGAEPM forecasting methodology, as well as suggestions for attention by the Materiel Group and by the Finance & Corporate Services Group.

***Management Action:** A comprehensive action plan has been developed. A high-level Oversight Committee has been established with a mandate to improve associate NP management. The responsibilities of the NP Oversight Committee (NPOC) is to identify current NP pressures, develop funding priorities, modify the allocation process, and propose appropriate revisions to the Defence Management System (DMS) Manual.*

It is also intended that the NPOC will propose better alignment between NP allocations and the Department's business planning processes -- in particular, the impact of the capital program on future NP resources. Relative to the four options proposed by this CRS study an interim measure has been taken to allocate NP funds for fiscal year 2003/04 on the weighted basis of future demand and the three-year historical expenditure baseline. The NPOC will also examine those NP-funded activities that would be more appropriately managed within other operating budgets.

CAVEAT

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Further, this independent study was performed to provide an independent assessment relative to specific concerns on the part of senior management. It was not conducted in accordance with the rigour associated with an internal audit or evaluation. The conclusions and recommendations are, however, supported by sufficient substantiation to warrant attention by management.

Note: Certain of the financial information in this report has not been subject to specific confirmation by the Finance Division. Any discrepancies will not materially affect the overall conclusions or recommendations of the Study.

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OVERALL ASSESSMENT
"NP fiscal management is an art, not a science."

Our assessment of Materiel Support to deployed operations noted that fiscal pressures, and corresponding resource limitations, demanded an increasing, if not inordinately high, level of management excellence to ensure that resources are consistently directed to highest and best use. These same resource limitations pose particular challenges for the effective management of National Procurement (NP).

We responded to a request from the Vice Chief of the Defence Staff (VCDS) to determine causal factors involved in a circumstance whereby 2001/02 year-end NP forecasting, by the Air Equipment Project Management Division (DGAEPM), did not provide sufficient visibility of impending over-spending. A predicted $12M surplus for the entire NP Account, as forecast in April 2002, became an actual $33M shortfall; an eleventh-hour variance of $45M. DGAEPM expenditures figured prominently in this.

Past CRS internal audit and review work in National Procurement, allowed the current study team to provide comments at both the corporate and divisional level. The study has situated events in the context of opportunities to strengthen the management of NP: from funding allocation, through to forecasting and reconciliation of expenditures to plans and priorities.

Certain key circumstances/factors, respecting DGAEPM, and the management of NP funding for 2001/02, are as follows:

a. the original allocation of NP funding to DGAEPM was less than historical spending – Corporate-level NP planning did not give sufficient attention to existing contractual commitments;

b. the DGAEPM forecasts in the last quarter of 2001/02, were not accurately captured at the Group level;

c. it was assessed, at the Group level, that a higher percentage of expenditures would actually slip into the following fiscal year (i.e., 2002/03); and

d. The DGAEPM forecasting methodology was not supported by an analysis of historical gaps between commitments and expenditures – a ten-year historical analysis of expenditure trends was not expressed in like (i.e., current-year) dollars.

There were early indications of the potential for over-spending by DGAEPM. For example, the Departmental Financial Status Reports telegraphed a trend toward over-expenditure. However, various sources of information and assumptions were not appropriately reconciled to ensure that front-line estimates were appropriately challenged, but also, preserved in successive roll-ups to the extent that they were significant and withstood reasonable challenge. DGAEPM directors proved to have a reasonable view.

The study has made a number of suggestions, including options for improved apportionment of NP funding. Three options have been put forward as alternatives to the current zero-based annual budget approach for NP. Further, to improve forecasting of requirements and funding, improved understanding needs to be developed of: cost patterns/behaviours – relationships between costs and activity levels; major cost drivers (e.g., key weapon systems); contractual commitments and strategies; and, the relationships between capital acquisition and downstream costs. For those projects being funded through capital and NP, there are risks associated with funding availability and interplay. With respect to this latter point, and in view of efforts to develop seamless acquisition and in-service processes for equipment, there has also been some expression of concern regarding the clarity, if not viability, of distinct definitions of capital and NP funding.

Management Action: The Program Management Board has directed the establishment of an NP Oversight Committee, composed of senior staff from Level 1 organizations, to address NP management issues, including those raised by this study.

Presentation Deck: Detailed reporting on this study has taken the form of the attached deck, as was presented to the VCDS, ADM(Mat) and DG Finance. The deck is organized into four main sections: Background/Context; Specific Lines of Inquiry as requested by management; Other Considerations; and Recommendations.

MANAGEMENT ACTION PLAN

Ser	CRS Recommendation	OPI	Management Action
1	Improve Materiel Group Divisional forecasts with trend analysis of over-programming and commitment-expenditure gaps, particularly in the fourth quarter (by December 2003).	ADM(Mat)/ DMG Compt	Trend analyses will be provided to Divisions on their over-programming and commitment-expenditure gaps. A NP pressure and flexibility database will be developed. ADM(Mat) will establish a 5 per cent flexibility in divisional programs. DMG Compt will continue to co-ordinate with DG Fin on financial status report (FINSTAT) analysis.
2	ADM(Mat) to direct Divisions to use common value dollars and a limited number of years in trend analysis (by December 2003).	ADM(Mat)/ DMG Compt	The display of historical cost reports in current-year dollars will be investigated. The feasibility of an escalation tool for NP based on the Economic model will be pursued in light of the current escalation tools available. Trend analysis options will be addressed with the Division comptrollers.
3	Include fund reservation and pre-commitments in the Quarterly Review of total programmed costs (by April 2003).	ADM(Fin CS)	As a result of this recommendation, in June 2002 Director of Budget began to report fund reservation, pre-commitments, and total programmed costs in the monthly FINSTAT.
4	Include total programmed cost trend in Financial Status reports to the Program Management Board (by April 2003).	ADM(Fin CS)	In Fiscal Year 2003/04 the FINSTAT will begin reporting comparisons of current and prior year commitment data. Once sufficient data is accumulated three-year averages and trends will also be reported.

Ser	CRS Recommendation	OPI	Management Action
5	Conduct an option analysis for NP funding allocations (by October 2003).	VCDS/DGSP/ DFPPC	In March 2003, the PMB endorsed the terms of reference of the NP Oversight Committee (NPOC) that included the mandate to provide an improved NP allocation process. After considering three options, the NPOC adopted an interim NP allocation process in March 2003 based on a combined historical NP expenditure trend and future NP demand. The NPOC was directed by PMB to conduct a baseline review of the NP account and determine an overall NP strategy by October 2003.
6	Revise the Defence Management System manual to address National Procurement (NP) management processes (by April 2004).	VCDS/DGSP/ DFPPC	The NPOC was directed by PMB to develop and propose an improved NP Planning and Management Process to be implemented with a strategic long-term orientation by October 2003. As NPOC obtains the various approvals and endorsements required from PMB during FY 2003/04, details and information will be formalized in the DMS. NPOC terms of reference and the PMB approved 'working' definition of NP has been placed on the DGSP Defence Planning and Management website.
7	Quantify NP risks associated with the Capital program (by April 2004).	VCDS/DGSP/ DFPPC	DFPPC is in the process of identifying and quantifying the NP risks associated with specific capital program elements. This work is one component of the Business Planning Enhancement Working Group that will capture costs of projects and initiatives across the spectrum of NP, capital equipment, infrastructure, human resources and operating budgets.

REVIEW OBJECTIVE/FOCUS

- **Objective**

  The objective of this work was to assess the effectiveness of processes and practices applied to the management of the Chief of Air Staff (CAS) NP apportioned account for fiscal year (FY) 2001/02.

- **Focus**

  The work focused on circumstances surrounding 2001/02 over-spending relative to budget/ forecasts.

CONTEXTUAL SETTING

The following series of slides are intended to provide certain broader context for consideration of the specific lines of inquiry relative to the NP management/ forecasting processes within the Air Equipment Program Management Division. These slides will address:

- the definition and composition of National Procurement (Page 4)
- corporate guidance relative to NP (Pages 5 - 6)
- the relationship between air operations and costs (Page 7)
- variances: planned and actual NP funding for the Air Environment (Page 8)
- 5-Step NP funding allocation process (Pages 9 - 16)
- variances between Air NP demand (by weapon system), funding allocation and spending (2001/02) (Page 17)
- certain NP process limitations (Page 18)
- composition and annual NP spending by Air Environment (Page 19)
- Air Environment contractual commitments, by major fleet (Page 20)

CONTEXTUAL SETTING: KEY MESSAGES

The following are key points which are illustrated by the contextually-oriented slides in this section:

- NP amounted to $1,714M in 2001/02;
- the Defence Management System Manual provides limited guidance on NP;
- a 27 per cent decrease in annual flying hours, saw a corresponding expenditure decrease of only 4 per cent;
- NP apportionment planning has not acknowledged existing major contractual commitments;
- a complication is that not all equipment (e.g., CF-18s) in the same fleet is assigned the same priority for funding;
- peak forecast NP demand occurs in 2003/04 --- forecast shortfall ~ $779M;
- forecast NP shortfall for the Air Environment for 2003/04 is ~ $324M; and
- funding for all priorities assigned to weapon systems has been reduced to accommodate the gap between forecast demand and funding availability.

…. further key points illustrated by the contextually-oriented slides in this section:

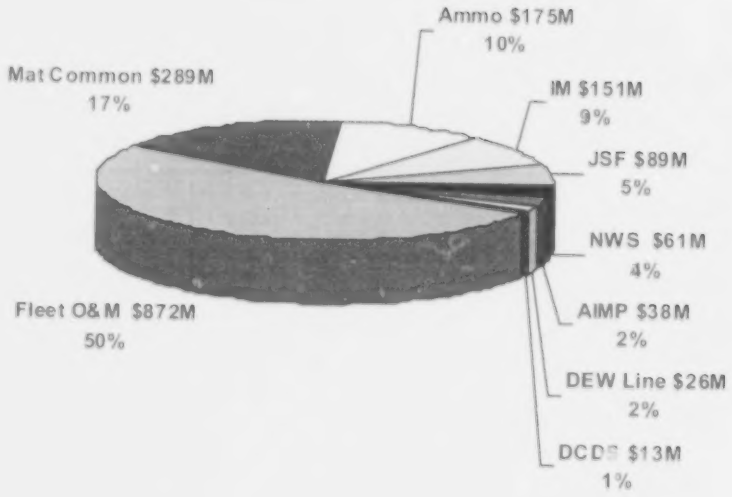
- major variances have typically occurred between original NP funding allocations and actual spending;
- air does not have in-house third-line maintenance capability, as is the case for the Navy;
- in-year funding adjustments and annual spending do not reflect assigned weapon system priorities as factored into original funding allocation process;
- NP allocations are infrequently reconciled to actual spending;
- funding allocations do not appear to acknowledge historical funding patterns; and
- the Air NP initial funding allocation for 2002/03 was more than $100M less than average spending over the last five years.

CONTEXT: WHAT IS NP?

Composition of "The Melting Pot" 2001/02 ($1,714M)

NP Definition in Defence Management System Manual

'materiel and services to support centrally managed equipment, services and systems in DND inventory'



ACRONYMS:

IM – Information Management
NWS – North Warning System
Dew – Distant Early Warning
O&M – Operations and Maintenance
JSF – Joint Strike Fighter
AIMP – Aurora Incremental Modernization Program
DCDS – Deputy Chief of Defence Staff

CONTEXT: DEFENCE MANAGEMENT SYSTEM (DMS) GUIDANCE

- **Definition of NP:**
  - Materiel and services to support centrally-managed equipment, services and systems in DND inventory.
- **Definition of Apportioned Accounts:**
  - Corporate accounts centrally-administered with levels of service for Level 1s expressed in dollars; and
  - Level 1s plan, prioritize, negotiate trade-offs within their apportioned accounts and operating accounts.
- **Approval of O&M (NP projects):**
  - Equipment modifications, unsupportable equipment/software, test and evaluation, tools/ test equipment; and
  - Identify in business plans, consult Director Force Planning and Program Coordination (DFPPC) to see if approval of Synopsis Sheets (SS) is required.

NP working group proposed NP rules of engagement rejected by Program Management Board in 1999.

The DMS Manual includes limited guidance on the Management of NP.

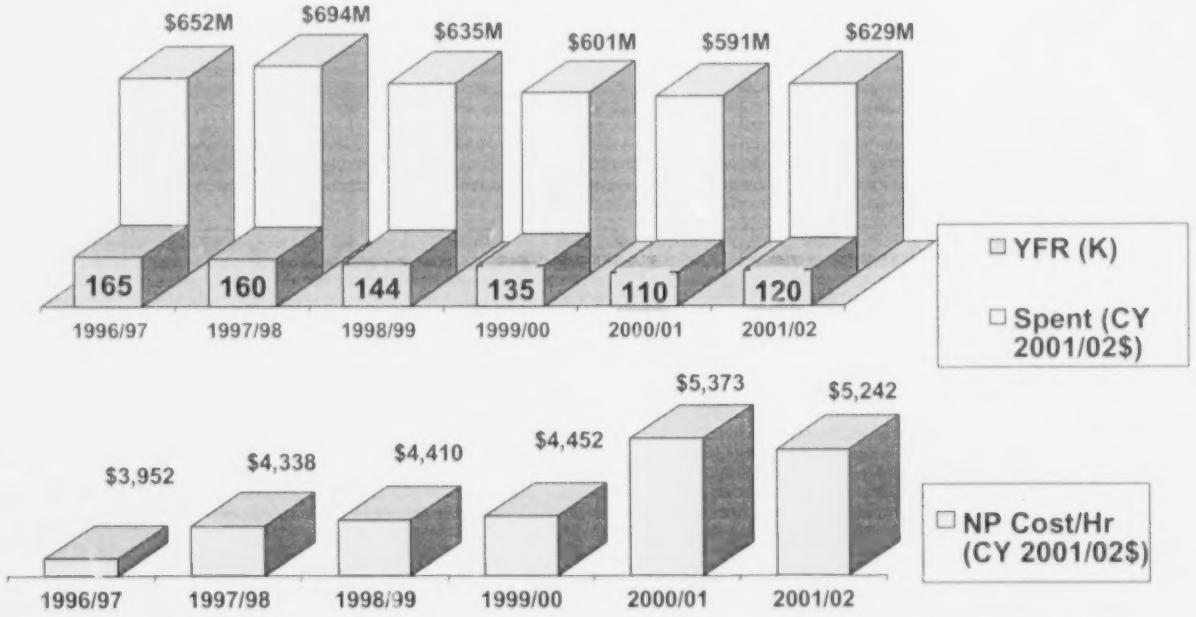
CONTEXT: 2001/02 BUSINESS PLAN (BP) GUIDANCE

- **Defence Plan (DP) 2001/02:**
  - NP apportionment – $613M CAS, weapon system priorities; and
  - Structural Unexpended Rate (SUR):
    - DM authorized $150M in 2001/02 – 1.3 per cent of Department budget,
    - SUR increased to $250M in 2002/03 – 2.1 per cent over-programming,
    - DG Financial Services (DG Fin S) suggests $500M SUR, and
    - ADM(Mat) has internal over-programming up to 19 per cent.
- **DGAEPM 2001/02 BP Plan:**
  - Scrubbed demand from $683M to $607M (ammo/Co-operative Logistics (COLOG) not included);
  - DP allocation $531M (ammo/COLOG not included); and
  - $76M NP "shortfall".
- **Aircraft Management Committee – May 2000:**
  - Recognized $66M shortfall, offset w/ $14M ammo reduction;
  - Predicted slippage in capital program to cover the shortage; and
  - $50M Funding pressure briefed to CAS/ADM(Mat) 18 December 2000.

Department SUR has been relatively conservative – 2001/02 carry-over $191M.

Historical costs of $605M/yr for the same fleets justify DGAEPM concern wrt future funding.

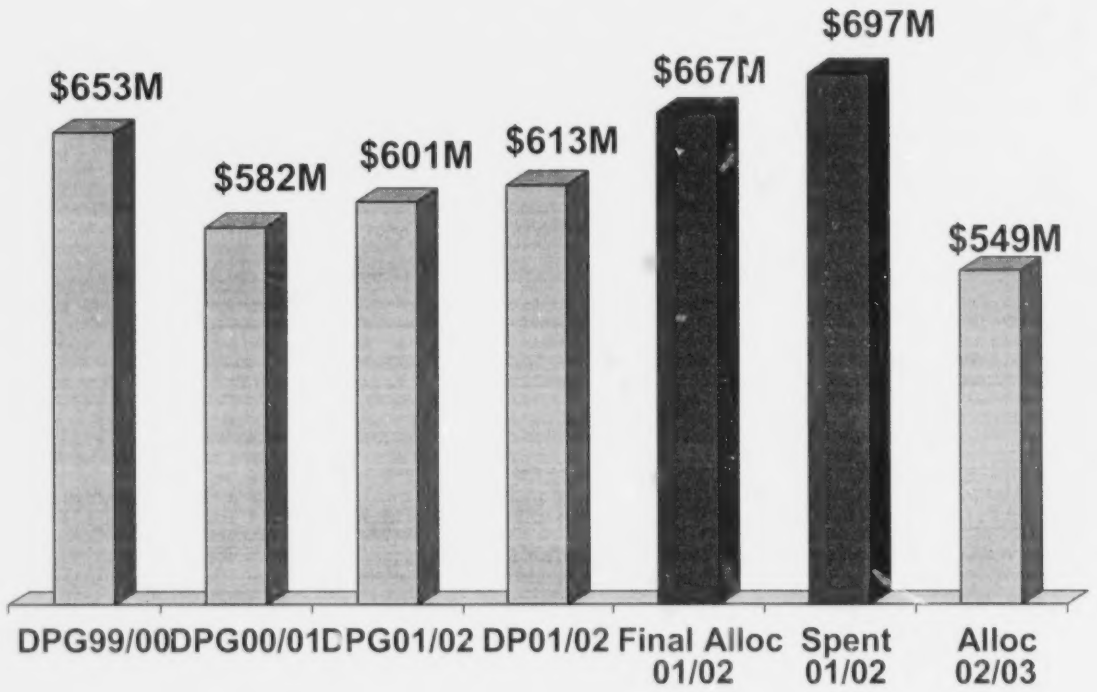
CONTEXT: AIR FORCE NP COST BEHAVIOUR



An average annual decrease of 9.5 per cent of Yearly Flying Rate (YFR) has resulted in an average annual decrease in NP expenditures of only 2.3 per cent due to aging fleets and AIMP.

A reduction in operational activity does not necessarily generate proportional savings.

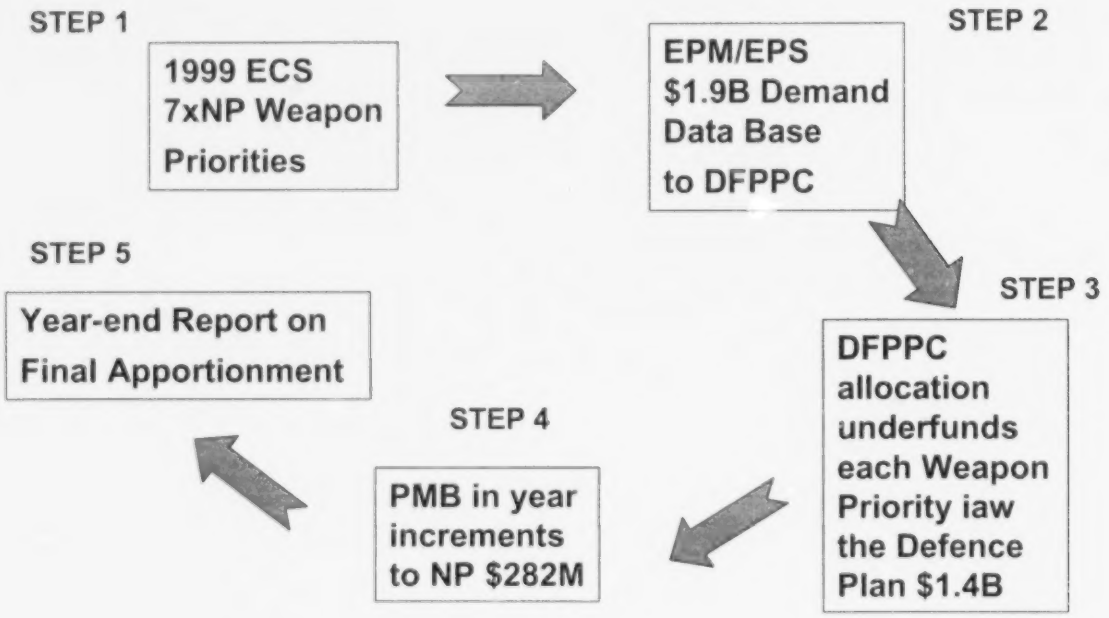
CONTEXT: DPG/DP NP PLANNING VARIANCES FOR CAS 01/02 ($M)
AMMO AND COLOG INCLUDED



Average maintenance contract in DGAEPM is 3 years in duration.

Inconsistent NP apportionment planning figures in Defence Planning Guidance (DPG) and Defence Plans (DPs) do not account for existing contractual commitments.

CONTEXT: NP ALLOCATION PROCESS


STEP 1
1999 ECS 7xNP Weapon Priorities
STEP 2
EPM/EPS $1.9B Demand Data Base to DFPPC
STEP 3
DFPPC allocation underfunds each Weapon Priority iaw the Defence Plan $1.4B
STEP 4
PMB in year increments to NP $282M
STEP 5
Year-end Report on Final Apportionment

ACRONYMS:

ECS – Environmental Chiefs of Staff
PM – Equipment Program Management divisions
EPS – Equipment Program Services division

CONTEXT: STEP 1 NP ALLOCATION PROCESS
1999 ECS PRIORITY FOR WEAPONS SYSTEMS

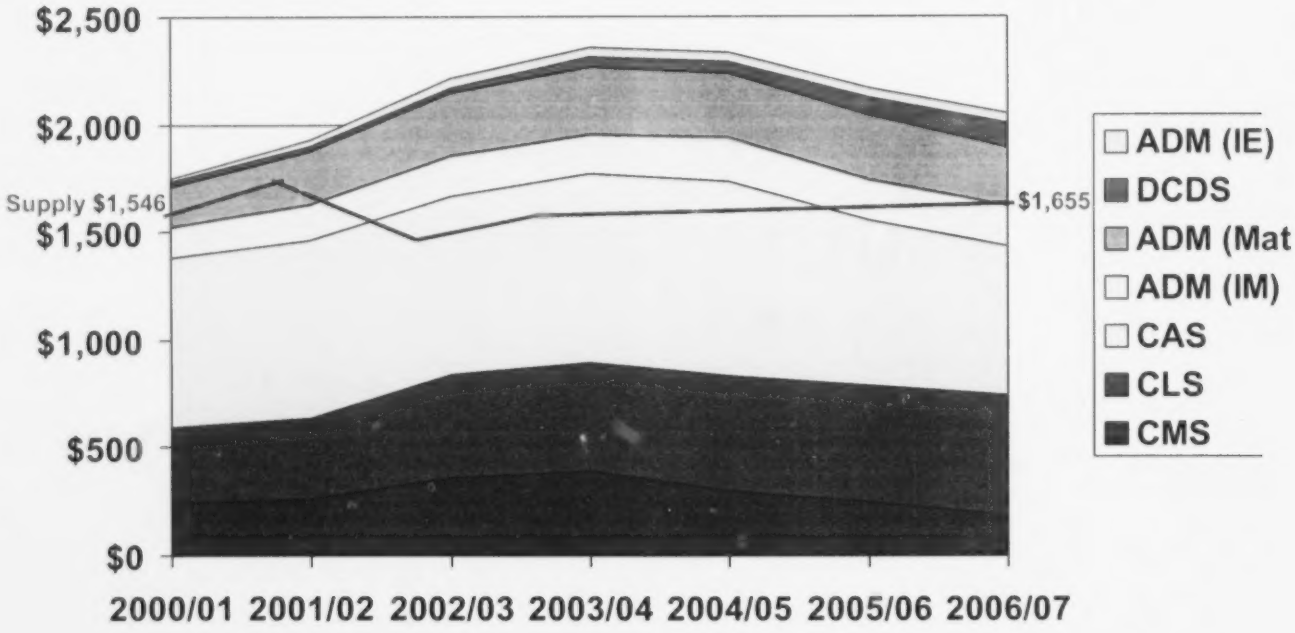
- **Pri 1** SAR, JTF2, **NORAD (10xCF18s)**, DART, IRF(L)
- **Pri 2** Safety, clothing, corporate IM, **AETE 4xCF18**
- **Pri 3** Vanguard/High Utility: **12xCF18**, Sea Kings, Aurora, Griffon, Hercules, CPF, MCDV, LAV3, Coyote, Grizzly, LSVW
- **Pri 4** Training Systems: Simulators, Dash 8, **21xCF18s**
- **Pri 5** Utility: AORs, M113s, Artillery, TUA, MLVW, Air Bus, Sea Kings not in Priority 3, Twin Otter
- **Pri 6** Main Contingency Force (MCF): Tribal class, Submarines, M109, MBT, **29xCF18s**
- **Pri 7** Others: Challenger, Buffalo, BV206
- **Pri 8** Equipment earmarked for disposal e.g. **42x CF18s**

Not all weapon systems in each fleet are assigned the same priority level.

ACRONYMS:

SAR – Search & Rescue
CF18 – Hornet Fighters
AETE – Aerospace Engineer Test and Evaluation
MCDV – Maritime Coastal Defence Vessel
LSWV – Light Support Wheeled Vehicle
TUA – TOW Under Armour
MBT – Main Battle Tank
JTF – Joint Task Force
DART – Disaster Assistance Response Team
CPF – Canadian Patrol Frigate
LAV – Light Armoured Vehicle
AOR – Auxiliary Oil Replenishment
MLWV – Medium Logistics Wheeled Vehicle
NORAD – Northern Air Defence
IRF(L) – Immediate Reaction Force (Land)

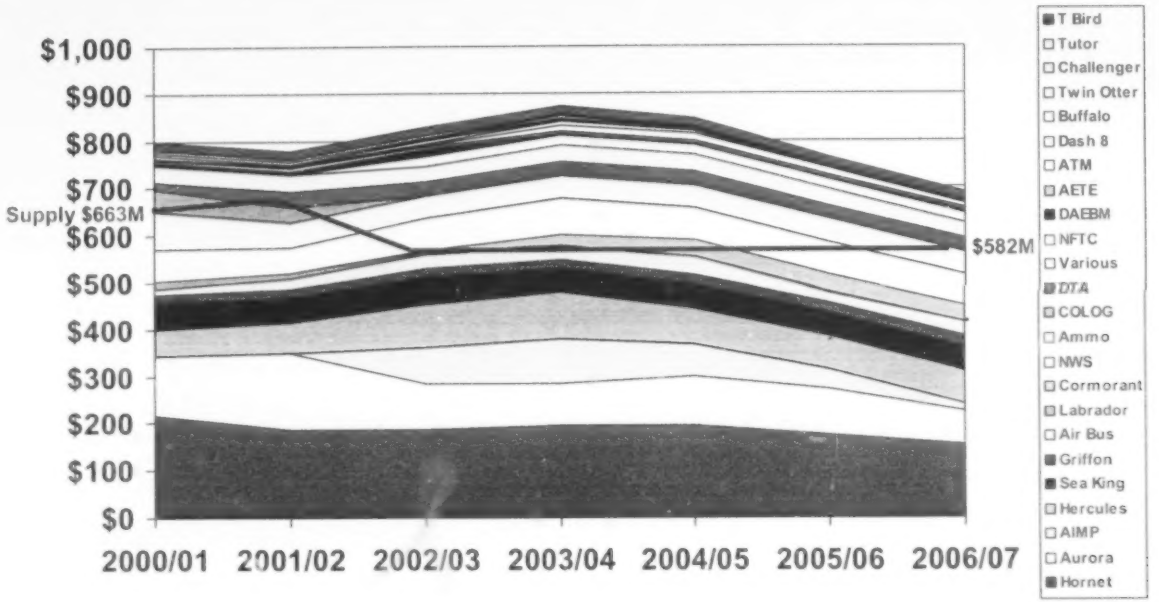
CONTEXT: STEP 2 NP DEMAND DATA BASE ($M)
13 REVISIONS IN 2001; 7 REVISIONS IN 2002



FY 2001/02 spent NP was $1,714M. Current allocation is $1,453M.

Peak NP demand is in 2003/04 at $2,359M – shortfall of $779M. Contractual commitments not recognized in the data base.

CONTEXT: CAS NP DEMAND BY FLEET ($M)



FY 2001/02 NP was $697M. Current allocation is $549M.

Peak NP demand is in 2003/04 at $873M – shortfall of $324M.

CONTEXT: STEP 3
DFPPC MIN FUNDING LEVEL DEFENCE PLAN 2001/02

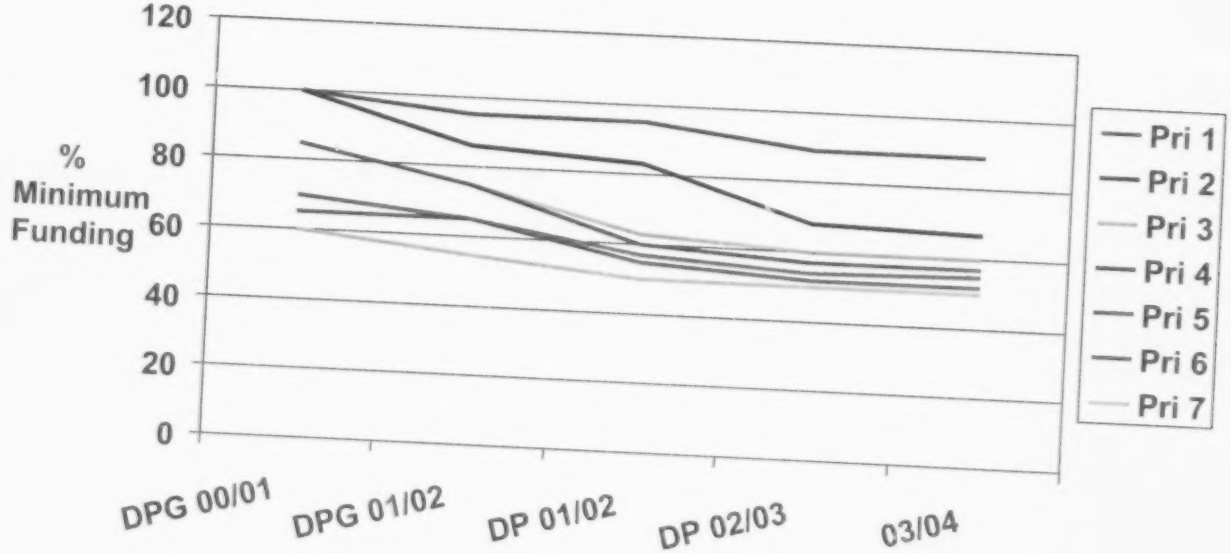
- **Pri 1 95%** SAR, JTF2, **NORAD (10xCF18s)**, DART, IRF(L)
- **Pri 2 83%** Safety, Clothing, Corporate IM, **AETE 4xCF18**
- **Pri 3 63%** Vangd/High Utility: **12xCF18**, Sea Kings, Aurora, Griffon, Hercs, CPF, MCDV, LAV3, Coyote, Grizzly, LSVW
- **Pri 4 60%** Trg Systems: Simulators, Dash 8, **21xCF18s**
- **Pri 5 57%** Utility: AORs, M113s, Arty, TUA, MLVW, Air Bus, Sea Kings not in Pri 3, Twin Otter
- **Pri 6 55%** MCF: Tribal class, Subs, M109, MBT, **29xCF18s**
- **Pri 7 50%** Others: Challenger, Buffalo, BV206
- **Pri 8 0%** Eqpt earmarked for disposal e.g., **42x CF18s**

Example Fleet Funding Formula:

CF18s = ((10*95%) + (4*83%) + (12*63%) + 21(60%) +29* (55%)) /80 CF18s = 61%

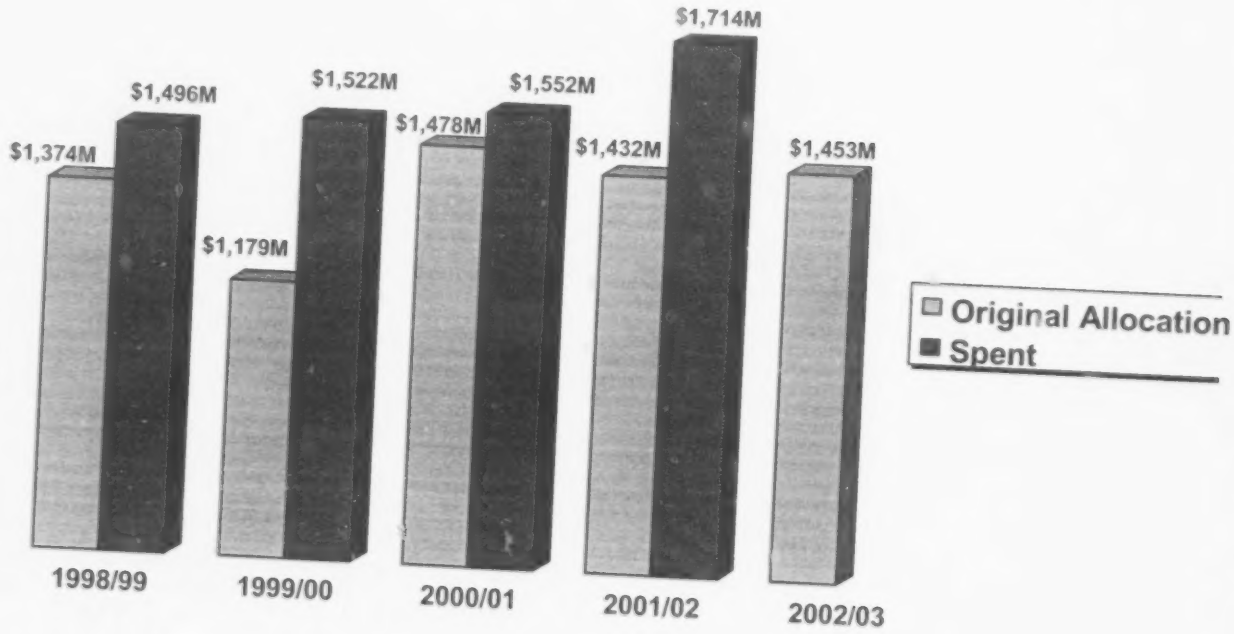
Process encourages inflation of the demand database.

CONTEXT: STEP 3 TREND LINE FOR MINIMUM PERCENTAGE NP FUNDING FOR DESIGNATED WEAPON SYSTEM PRIORITIES DPGS/DEFENCE PLANS



All weapon system priorities have experienced reduction in funding levels to accommodate the gap between funding supply and demand.

CONTEXT: STEP 4 NP ALLOCATION/IN-YEAR INCREMENTS FINANCIAL MANAGEMENT ACCOUNTING SYSTEM (FMAS) BUDGET HISTORY

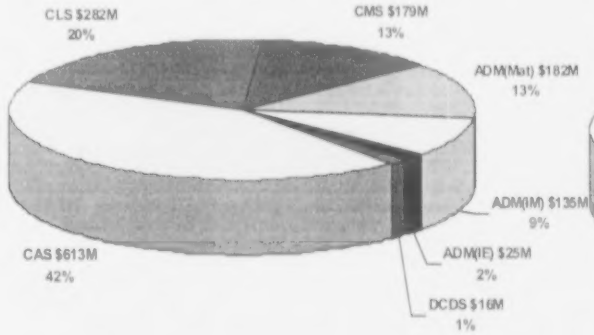


In-year variances range from $74M to $343M - 5 per cent to 29 per cent; 2001/02 included a Joint Strike Fighter (JSF) payment of $89M.

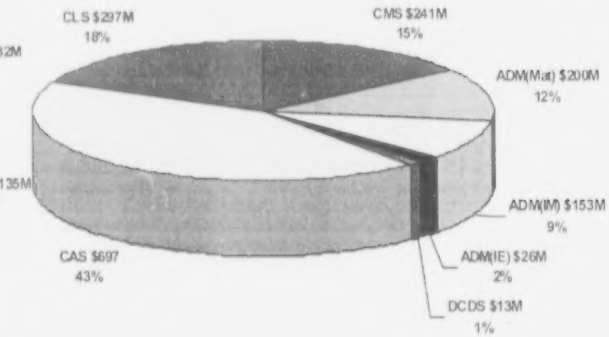
Volatile nature of NP risks over/under expenditures – no defined tolerance standards.

CONTEXT: STEP 5 IN-YEAR NP APPORTIONMENT ROLLUP; COMPARISON DP2001/02 APPORTIONMENT TO EXPENDITURES

2001/02 DP NP Apportionment $1,432M



2001/02 NP Expenditures $1,625M
(JSF not included)

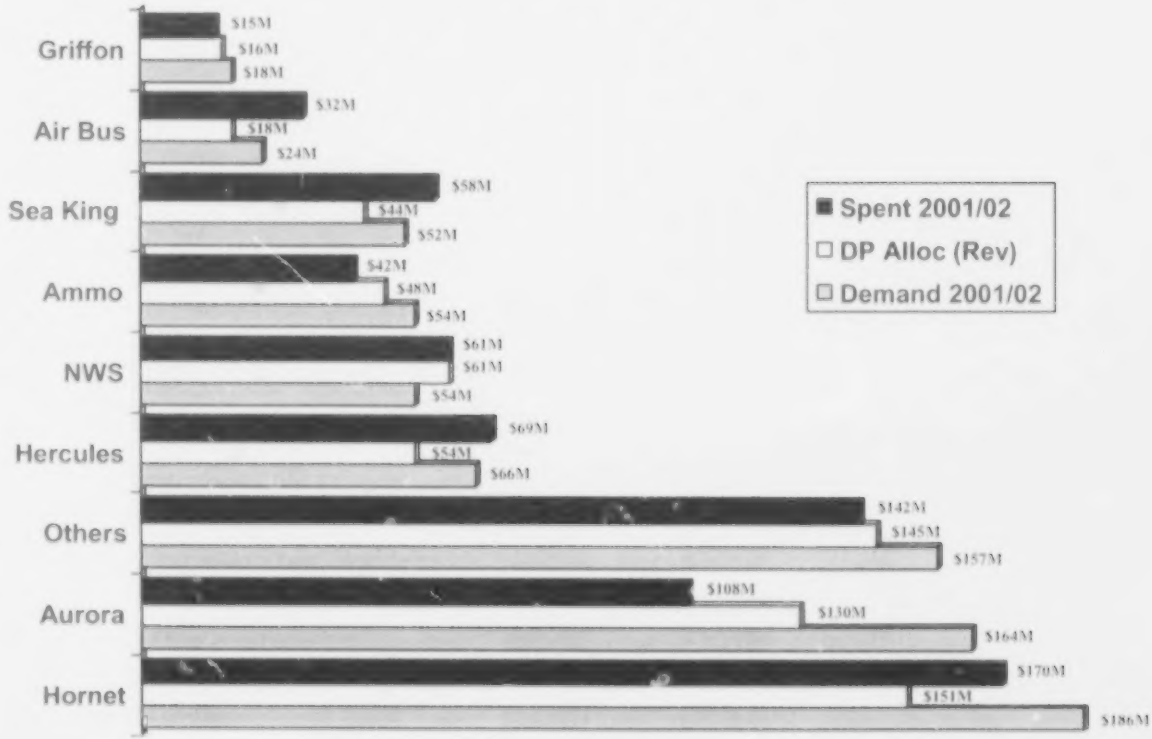


DGEPS and DGLEPM split out NP costs that support apportioned accounts.

JSF $89M payment increase to ADM(Mat) apportionment not included.

Irregular reports to NP Working Group – not available in FMAS.

CONTEXT: CAS 2001/02 NP DEMAND/DP PRI/SPENT ANALYSIS
DEMAND $775M / DP ALLOCATION $667M / SPENT $697M

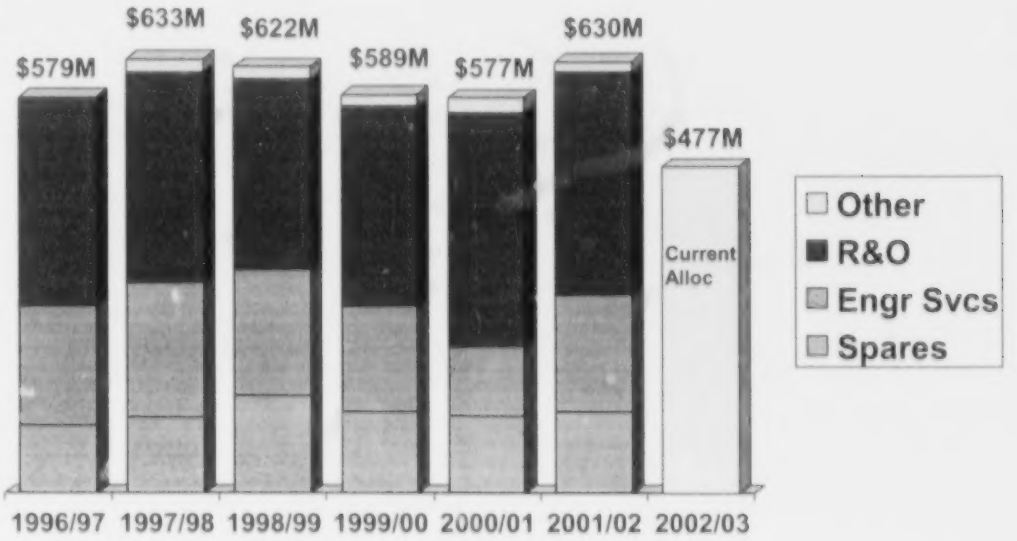


DP allocation priorities not reflected in spending due to new demands and slippage of AIMP.

CONTEXT: NP PROCESS LIMITATIONS

- Multi-priorities within Fleets of weapon systems
- Demand data base:
  - Frequent revisions just prior to commencement of fiscal year
  - Potential for inflation – more demand may mean more money
  - Existing contractual commitments not identified during allocation process
  - $107M discontinued activity e.g., service air
  - Some Level 1 submissions to DFPPC do not match the template
- Insufficient recognition of impact of in-house third-line capability in Sea and Land Environments:
  - Fleet Maintenance Formation (FMF) Cape Scott
    - $81M per year (21 per cent 3rd line maintenance – $17M)
  - FMF Cape Breton
    - $62M per year (25 per cent 3rd line maintenance – $16M)
  - 202 Workshop $21M per year
- In-year adjustments not based on weapon system priorities
- Actual expenditures are not necessarily reflective of Defence Plan weapon system funding priorities
- Infrequent comparison of NP apportionment to actuals
  - FMAS does not represent apportioned accounts – MASIS should

CONTEXT: DGAEPM EXPENDITURE TREND (BY$M) AMMUNITION/COLOG NOT INCLUDED



2001/02 was the first year $26M COLOG was included in DGAEPM budget
$31M was provided for Op Apollo in 2001/02 – R&O (Repair and Overhaul)

Historical average spending of $605M not sufficiently considered in allocation process.

CONTEXT: DGAEPM CONTRACT COMMITMENTS 2001/02 ($M)

Major Fleets	Firms	Annual Value
Hornet	Bombardier, Orenda, Harris	$157M
Aurora	IMP, Litton, Standard Aero	$114M
North Warning System	Frontec/Pail	$64M
Hercules	Standard Aero, Spar	$59M
Sea King	Various	$54M
Total		**$448M**

System Support Contracting
"*The Way Ahead*"

- bundle to 30 contracts
- 2 to 3 vendors/fleet
- 8 to 10-yr contracts
- $4.2B for 3 fleets: (Hornet, Aurora, Herc)
- performance metrics
- cost saving sharing
- variable activity levels in terms of payment

Over 5,500 commitment transactions with 450 firms in 2001/02.

System-Support Contracting anticipated to be cheaper, but less flexible.

SPECIFIC LINES OF INQUIRY

Having established certain larger context, principally regarding the process for allocating NP funding, the following series of slides addresses more direct inquiry relative to management/forecasting difficulties experienced by DGAEPM at the end of fiscal year 2001/02. These slides will address:

- attributes of the NP forecasting process (Page 23)
- controls associated with the Financial Management & Accounting System (FMAS) (Page 24)
- attributes of NP forecasting for 2001/02 (Page 25)
- specifics of DGAEPM NP forecasts at 2001/02 year end (Page 26)
- DGAEPM Over-Programming for 2001/02 (Page 27)
- breakdown of DGAEPM over-expenditure for 2001/02 (Page 28)
- DGAEPM monthly expenditure trend April 2001 - September 2001 (Page 29)
- Materiel Group NP forecasting for 2001/02 year end (Page 30)
- Director Budget FINSTATS for NP Account 2001/02 (Page 31)
- NP Allocation versus Actual Spending for major NP users (Page 32)

SPECIFIC LINES OF INQUIRY: KEY MESSAGES

The following are key points identified in the slides in this section:

- Limitations were noted in the Departmental, Group and DGAEPM NP forecasting methodology and reporting.
- The NP account has over-spent for two consecutive fiscal years.
- Warnings of potential over-expenditure were apparent from FINSTATS.
- The Materiel Group Comptroller expected more of the 2001/02 NP program costs to cash out in 2002/03, vice 2001/02.
- Final DGAEPM over-expenditure was $28M – 104 per cent of the final allocation.
- DGAEPM over-expenditure was evident in the first six months of 2001/02.
- DGAEPM forecasts did not include over-programming trend analysis.
- DGAEPM expenditure history was too volatile for the long-term trend analysis that was done (10 years).
- DGAEPM forecast trend analysis was not done in present value dollars.
- FMAS built-in controls do not require commitment accounting before payments are made.

LINES OF INQUIRY: NP FORECASTING PROCESS

- 2001/02 NP Quarterly Reviews (QR) by the Program Management Board (PMB)
  - Information up to 15 days old prior to PMB meeting
  - Commitments/expenditures not included, but will be in 2002/03
  - December QR on Corporate Accounts – less detail than in FINSTAT
- Monthly FINSTATS (Financial Status)
  - 2-weeks old prior to tabling at PMB
  - Commitment Accounting currently optional in FMAS
- ADM(Mat) – forecast is relatively more rigorous
  - QR input requires total program including:
    - fund reservation, pre-commitments, commitments and expenditure
  - Materiel Group Internal program status every two weeks
  - Last quarter –weekly changes $3M or greater reported in Division forecasts
- DGAEPM – QR has same composition as that by ADM(Mat): Forecasts based on 10-yr expenditure history; Comptroller forecast less spending than Directors.

Expenditure history too volatile for forecasts - not in present value dollars DGAEPM forecasts did not include over-programming trend.

LINES OF INQUIRY: FMAS CONTROLS

- **Actual budget** is the allocation ceiling – a *hard* control
  - comptroller staff view that this should be retained at the Group level – adds flexibility across the board when not devolved in FMAS
- **Commitment budget** – a *soft* control
  - devolved to Divisions – a red flag in FMAS when exceeded
  - payments can exceed a Division's commitment budget, but not the Group allocation (i.e., actual budget)
- **Individual Commitments** are not mandatory in FMAS
  - could be set at General Ledger (GL) level e.g., R&O, spares
  - payments can be made if no individual commitment exists
  - individual commitments can be multi-year
  - payments in excess of individual commitments can be made in spite of commitment budget

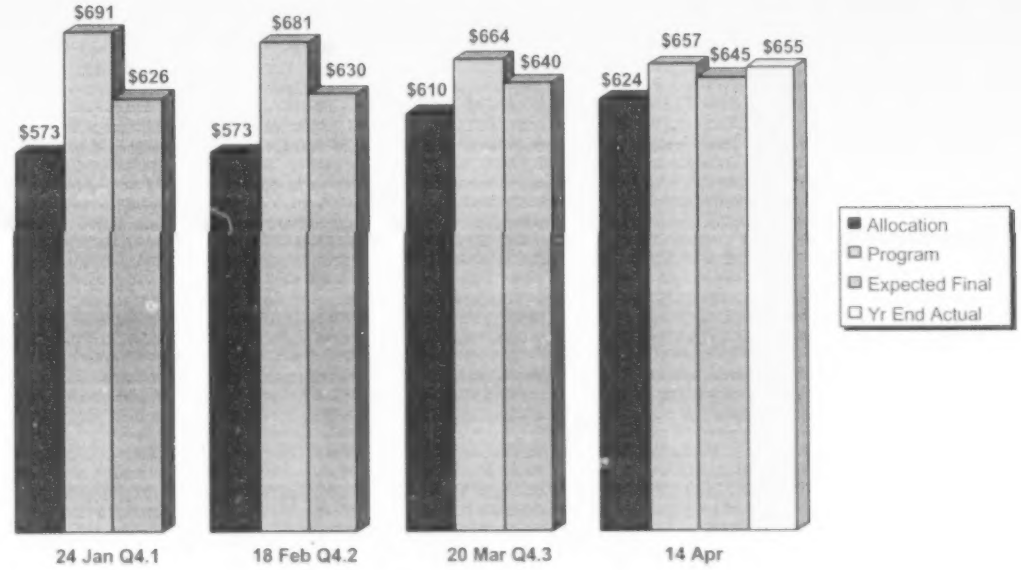
FMAS payment controls take effect only at ADM(Mat)/Group level.
DGAEPM info system reconciles payments w/ commitments – FMAS does not.

FMAS built-in controls do not enforce commitment accounting.

LINES OF INQUIRY: NP FORECAST 2001/02

- **Quarterly Reviews (QR) FY 2001/02**
  - NP QR 4.3 identified $28M pressure from Operation Apollo
    - QR showed $626M, vice $640M forecast by DGAEPM
- **Monthly FINSTATS**
  - showed 6 to 8 per cent higher expenditure for NP than previous year
  - did not reflect the most recent NP allocations
- **ADM(Mat)**
  - 17 April 2002, predicted under-expenditure of $12M
  - expected $82M commitments to move to 2002/03, only $35M actually moved
- **DGAEPM**
  - QR 4.3 predicted $640M
  - used 10-yr expenditure history, not at present value
  - 14 April 2002, increased forecast to $645M – not reported to Director Materiel Group Comptroller (DMG Compt)

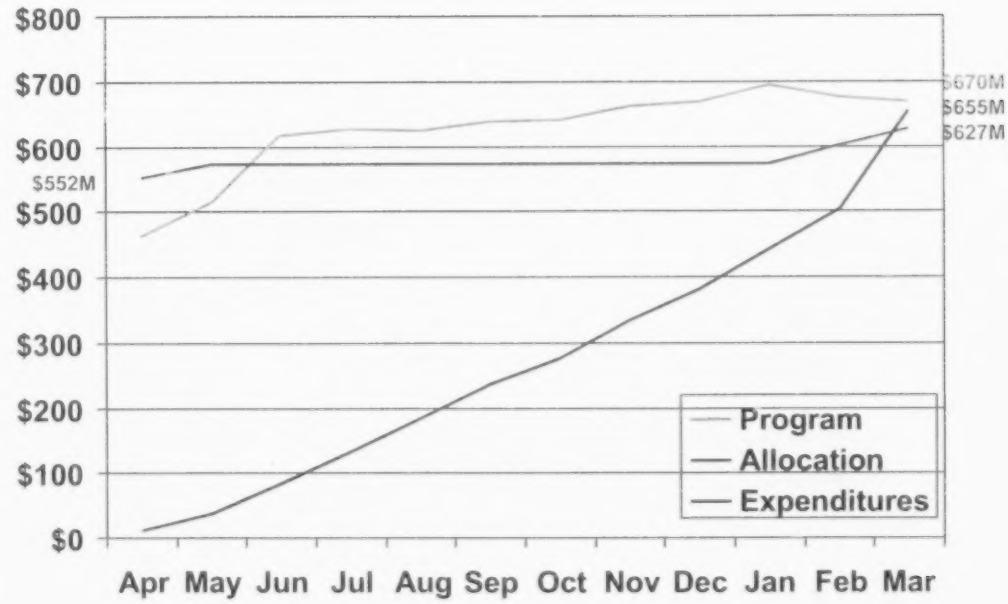
LINES OF INQUIRY: DGAEPM 2001/02 NP FORECASTS ($M) PERIOD 11 TO 14



Expected final based on expenditure history – not commitments/Dir forecasts.
ADM(Mat) Q4.3 rollup reflected $626M vice $640M. 14 April forecast change not reported to DMG Compt.

Limitations in DGAEPM forecasting methodology and reporting.

LINES OF INQUIRY: 2001/02 DGAEPM OVER-PROGRAMMING ($M)



Budget allocation does not include CAS NP $40M ammo apportionment.

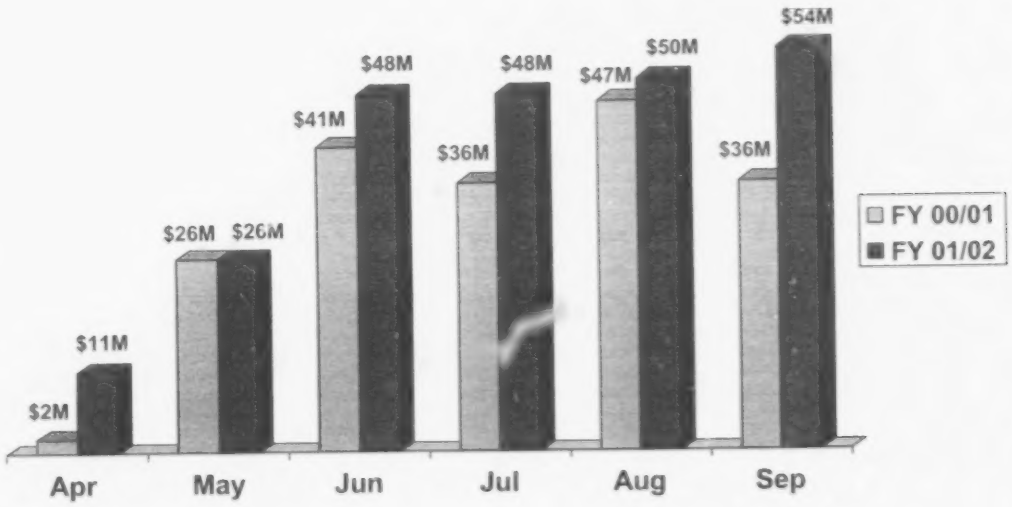
DGAEPM over-programmed by 15 per cent in January 2002 (current allocation + $31M Op Apollo due).

LINES OF INQUIRY: DGAEPM 2001/02 NP OVER-EXPENDITURES

Directorate	Alloc $16M Res	Spent	Cause
Fighter	$162M	$180M	**$10M combustion cases, SESC wage increase.**
Maritime	$145M	$158M	**Cormorant delay – $6M Sea King.**
Tpt/Hel	$170M	$184M	**$6M SPAR R&O. Air Bus 4xHMV, engine upgrade, new rates $3M. Griffon early payments $3M.**
Radar/Comm	$80M	$76M	**NWS rate increase.** **NWS truck disposal revenue $8M.**
DTA	$25M	$23M	
DAEBM	$25M	$30M	**$6M COLOG payments w/o DCPS pre-commitments.**
AETE	$3M	$3M	
Total	**$625M**	**$655M**	**Allocation increased to $627M in period 13.**

Final DGAEPM over-expenditure of $28M – 104 per cent of allocation.

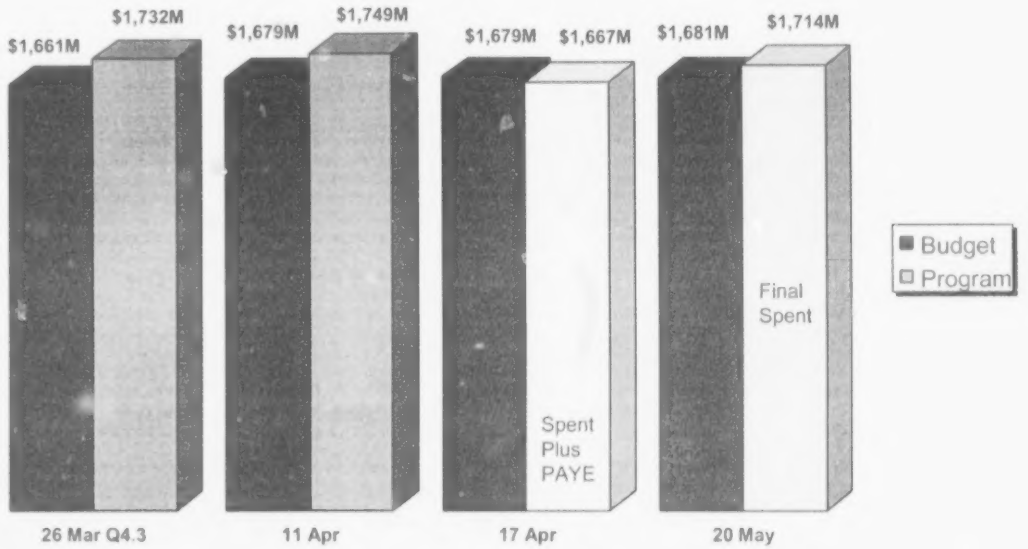
LINES OF INQUIRY: DGAEPM NP MONTHLY EXPENDITURE TREND ($M) APRIL 2001 – SEPTEMBER 2001



Prior to 11 September event, monthly expenditures were higher than those of the previous FY.

Over-expenditure was evident in the first six months of 2001/02.

LINES OF INQUIRY: ADM(MAT) INTERNAL NP 2001/02 FORECASTS ($M) PERIOD 12 TO 14



Business plan request for fin staff increase not approved.

On 17 April 2002 DMG Compt expected more program costs to cash out in 2002/03.

LINES OF INQUIRY: FINSTATS/QR FOR NP ACCOUNT 2001/02

FIN STATS as of	Expenditures compared to 00/01	Text as provided by Acct Mgr	From DMG Comp QR
30 Sep 01	4.1% higher	"...pressures continue to exist"	
31 Oct 01	4 % higher	"...pressures are increasing"	
31 Dec 01	8.4 % higher	"...on target to fully spend at year-end."	21 Dec. Nil surplus/deficit "...will achieve full utilization of the resources..."
31 Jan 02	8 % higher	"...pressures ...due to increased operational tempo."	6 Feb. $87M shortfall To be offset by Op Apollo and IO and $11M manageable
28 Feb 02	8.8 % higher	"...forecasted a small pressure..."	6 Mar. $7M shortfall after Op Apollo reimbursement
31 Mar 02	6 % higher	"...to cash-out by year-end."	5 Apr. $28M shortfall to be offset by Op Apollo

DB plans to change FINSTAT to reflect commitment accounting. Data is 2 weeks old when tabled at PMB – not linked to QR.

Warnings of potential over-expenditure were apparent in 2nd and 3rd quarters, 2001/02 of 2001/02.

LINES OF INQUIRY: NP ACCOUNT 2001/02 ($M) FINAL NP ACCOUNT EXPENDITURES

Division	Allocation	Spent	% Spent	00/01 Spent
DGMEPM	$216	$222	103%	(1) 113%
DGLEPM	$312	$309	99%	104%
DGAEPM	$627	$655	104%	98%
DGEPS	$359	$362	101%	101%
J4 MAT	$53	$52	98%	100%
DGIIP(JSF)	$89	$89	100%	100%
ADM (IE)	$25	$25	100%	98%
Total	**$1,681**	**$1,714**	**102%**	**102%**

2001/02 deficit of $33M is a loan that will be offset from FY 2002/03 NP.
$43M deficit avoided in 2000/01 w/ $50M injection in NP 24 April 2001 resulted in $7M surplus. Note (1): Based on allocation as of 16 February 2001.

NP Account has overspent two consecutive years.

OTHER NP CONSIDERATIONS

There are number of significant factors in the Department that impact the management of NP, such as operational activity and the capital program. These slides will address:

- the level of operational activity and linkage to NP (Page 35)
- the criteria for in year increments to the NP account (Page 36)
- the impact of capital projects funded by the NP account (Page 37)
- the down-stream effects of the capital program on NP spending (Page 38)
- a historical model to forecast NP spending associated with the capital program (Page 39)

OTHER NP CONSIDERATIONS: KEY MESSAGES

The following are key points identified in the slides in this section:

- Only 27 per cent of annual NP costs for all fleets are variable with respect to activity levels.
- NP financial presentations to PMB have not included all of the appropriate criteria to substantiate in-year adjustments.
- Partial funding of a capital project with NP funds introduces significant cost/schedule risks.
- Synopsis sheets for capital projects do not consistently reflect reasonable NP costs (as required by the DMS).
- NF costs associated with the long term capital program, could be better predicted through improved cost models.

OTHER NP CONSIDERATIONS: ACTIVITY LINKAGE TO NP DMAC STD COSTS 2001/02 – $764M (SEA DAYS/YFR/KM)

Step variable are those contracted costs that will vary over time – usually 3 years.

Total variable is $205M vs $559M step variable – 27 per cent of fleet NP costs are variable.

OTHER NP CONSIDERATIONS: CRITERIA FOR IN-YEAR ADJUSTMENTS

Level 1	DP 2001/02 ($M) Apportionment	Spent 01/02 ($M)	In Year Variance
CMS	$179	$241	35%
CLS	$282	$297	5%
CAS	$613	$697	14%
ADM (Mat)	$182	$289	59%
ADM(IM)	$135	$151	12%
ADM(IE)	$25	$26	4%
DCDS	$16	$13	-19%
Total	**$1,432**	**$1,714**	**20%**

- Unforecast activity level for a weapon system
- Variable NP costs
- Stock levels of spares
- Serviceability
- Unsatisfied demand
- Procurement capacity – standing offers

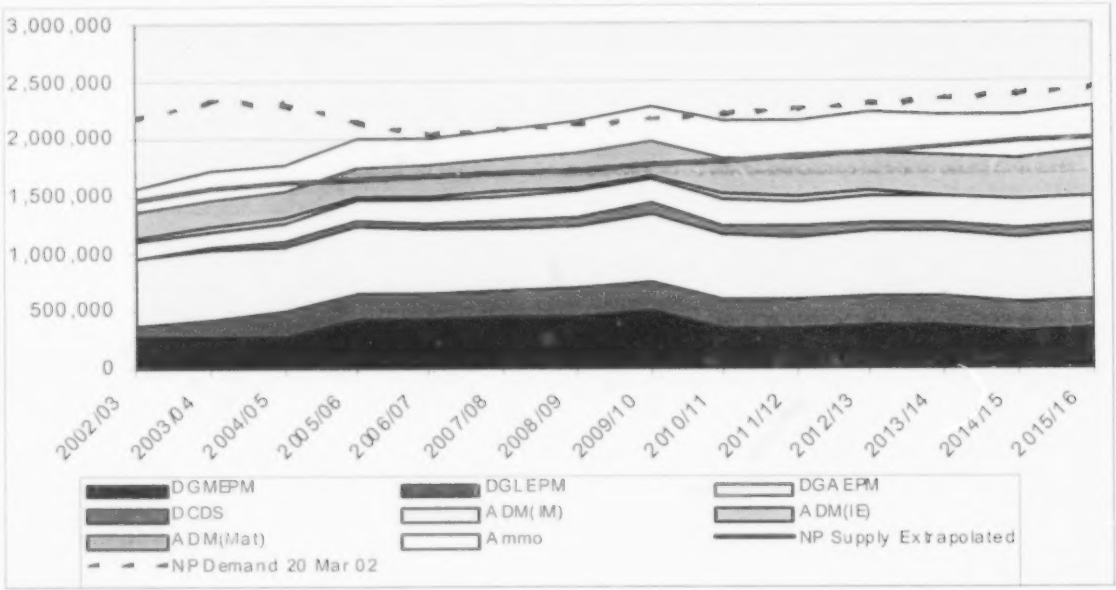
NP financial presentations to PMB have not included these criteria for in-year adjustments.

OTHER NP CONSIDERATIONS: CAPITAL PROJECTS WITH NP COMPONENTS

- **Aurora Modernization $353M**
  - $282M remaining NP out to 2006/07
  - Represents 10 per cent of historical DGAEPM annual spending
- **Frigate Equipment Life-Extension $290M – 2005 to 2017**
- **Wheeled Light Armoured Vehicle Life-Extension $14.6M**
- **Concerns**
  - Schedule integration with capital funded Work Breakdown Structure
  - Impact on NP project funds if delayed
  - Lack of contingency in NP projects
  - Unreliability and volatility of NP allocation process
  - Impact on fleet support of NP funds diversion to a capital

Partial funding of a capital project with NP funds introduces significant risk.

OTHER NP CONSIDERATIONS: LTCP(E)/NP FUNDING LINKAGE ($K)
25 JUNE 2002 DFPPC ANALYSIS (DRAFT)



Gap between NP Supply and Demand will increase commencing in 2005/06. DFPPC aware estimate excludes MHP, CSH, LLAD, AVGP, TAVs, M109s, some vehicles.

MHP – Maritime Helicopter Project, CSH – Canadian Search and Rescue Helicopter, LLAD – Low Level Air Defence, AVGP – Armoured Vehicle General Purpose, TAV – Tracked Armoured Vehicles, M109-Self Propelled Artillery.

Synopsis sheets do not consistently reflect NP costs as required by the DMS.

OTHER NP CONSIDERATIONS: CAPITAL NP FORECASTING MODEL

Weapon Complexity	Weapon System	Annual Demand (M)	Acquisition Cost(M)	Annual NP % of Acq.	Acq. Cost(M) FY01/02$	Annual NP % of Acq.
High	CPF	* $120	$7,330	2%	$8,508	1%
High	Tribal Class	* $51	$2,031	3%	$9,301	1%
High	Hornet	$165	$4,348	4%	$6,906	2%
High	Aurora	$98	$1,049	9%	$1,666	6%
Medium	Leopard Tank	$30	$255	12%	$647	5%
Medium	AORs	* $27	$65	42%	$298	9%
Medium	Sea King	$51	$102	50%	$606	8%
Low	MCDV	$34	$626	5%	$686	5%
Low	HLVW	$13	$271	5%	$297	4%
Low	Hercules	$74	$943	8%	$4,549	2%
Low	Griffon	$17	$803	2%	$898	2%
Low	Air Bus	$19	$371	5%	$431	4%
	Total	**$699**	**$18,194**	**4%**	**$34,793**	**2%**

Historical acquisition costs from ADM(Mat) January 2002 DSP Update; Annual NP demand from DFPPC June 2002 estimates; 2001/02 $ value from Bank of Canada Inflation Calculator.

* These figures do not include FMF costs.

RECOMMENDATIONS: OPTIONS TO IMPROVE THE NP APPORTIONMENT PROCESS OPTIONS

- **Option 1** Status quo: demand database adjusted by Defence Plan (DP) funding priorities
- **Option 2** Historical baseline less 10 per cent prioritized by DP or (ADM)Mat
- **Option 3** Contractual commitment baseline with discretionary spending priorities set by DP or (ADM)Mat
- **Option 4** Capability program NP-related performance measures for each defence task – performance measurement indicators
  - Availability of equipment
  - Serviceability of equipment
  - Inventory status
  - Demand satisfaction
  - Stock-out rate

DGAEPM Indicators
IORs, Stock-outs, PIF, Robs, MTBDE, MP Hrs, PMP Hrs, Abort Rate

As the performance measurement framework matures, Option 4 may be adopted.

ADDITIONAL SPECIFIC RECOMMENDATIONS

- **ADM(Fin CS)**
  - Include fund reservations and pre-commitments in Quarterly Review total programmed costs by April 2003
  - Include total programmed cost trend in Financial Status reports to PMB April 2003
- **ADM(Mat)**
  - Improve Division forecasts with trend analysis of over-programming and commitment-expenditure gaps, particularly in the fourth quarter (by December 2003)
  - Direct Divisions to use common value dollars and a limited number of years in trend analysis (by December 2003)
- **VCDS**
  - Revise the DMS to address NP management process (by April 2004)
  - Conduct an option analysis for NP allocation processes (by October 2003)
  - Quantify NP risks associated with the Capital program (by April 2004)